

ABSTRACT OF THE INVENTION

A transistor comprising a gate electrode formed on a gate dielectric layer formed on a substrate. A pair of source/drain regions are formed in the substrate on opposite sides of the laterally opposite sidewalls of the gate electrode. The gate electrode has a central portion formed on the gate dielectric layer and over the substrate region between the source and drain regions and a pair sidewall portions which overlap a portion of the source/drain regions wherein the central portion has a first work function and said pair of sidewall portions has a second work function, wherein the second work function is different than the first work function.